SIEMENS

M 1000/3000/3000 Nova

[redacted] SP

Update Instructions SP006/02/P

Title: Exchange of PC Board D705

Reason for update:	☐ Safety	☒ Performance
Urgency:* See NOTICE page 1-1	☐ Immediate	☒ Within 12 months
Update materials required?	☒ Yes	☐ No
Material free of charge?	☒ Yes	☐ No
Return of parts?	☒ Yes	☐ No
Estimated completion time:	1 hour	Number of CSE's: one (1)
Customer Information?	☐ Yes	☒ No

Systems/Products affected/System identifying IVK

Name	Part No.	Serial No.
Mammomats	61 34 709	7500 - 8699

Components affected/to be modified/IVK

Name	Part No.	Serial No.	Component status	
			affected	not affected
n.a.	n.a.	n.a.	n.a.	n.a.

Chg. Rev. No.: RBN 2050758
Name: Lindström/Larsson/Engman
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Print No.: SPB7-230.896.08.02.02 Doc. Gen. Date: 08.02
Replaces: SPB7-230.896.08.01.02 66 30 953

Chapter	Page	Revision
all	all	02

Document revision level

The document corresponds to the version/revision level effective at the time of system delivery. Revisions to hardcopy documentation are not automatically distributed.

Please contact your local Siemens office to order current revision levels.

Disclaimer

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Systems/Products Affected

MAMMOMAT 1000/ 3000/ 3000 Nova units, material no. 61 34 709, serial no. range 7500 - 8699.

Reason for the Update

The MAMMOMAT generators in the serial numbers mentioned above frequently indicate ERROR 606, which may be attributable to a batch of one type of component with unstable characteristics used on PC Board D705.

There are different reasons which lead to display ERROR 606, e.g. the PC Board D705 is faulty, the tube is faulty, or the inverter has failed. In order to substantially decrease the incidence of ERROR 606 the PC Board D705 was revised and improved. As of the serial no. 8700 the MAMMOMAT generators are delivered with this new D705 (AS06).

Special Tools/Documents

- Oscilloscope
- ESD-work pad with wrist-strap
- Wiring Diagrams for the affected MAMMOMAT unit

Ordering Information

The Update kit 66 33 080 consisting of:

- the PC Board D705, "Filament Control Board" material no. 11 64 230, AS06
- Update Instructions SP006/02/P (this document)

can be ordered via CS ML.

NOTICE

Due to large amount of Update Kits involved, the update will be performed by means of recycling and full refurbishment of the boards returned from the field. The UI kit has a REP-status!

Please return exchanged boards through normal process as soon as possible, to speed up the performance, thus contributing to the endeavour to finish the update within one year.

There will be a process in place of debiting the full price of the kit upon order and crediting the same upon return. For the purpose of the UI, always return the PC Board under the material number of the kit, even when only the D705 is sent.

The "old" PC Board D705 (AS <06) should be properly packed in the original packaging material in which the Update Kit arrived. Observe ESD regulations. Fill in the Request for Credit (Gutschriftsantrag, GA) with the code and name of this UI, enter the serial number of the Mammomat concerned; only under these conditions the full refund will be granted.

The Regional Units will be separately advised how many kits to order from their actual requirement at the time, and not to order anew before having returned the exchanged boards.

It is the responsibility of each Regional Unit to set priority as to which sites are going to be updated first from the partial batch allocated to them.

The usual reimbursement for travel and work time will be credited/transmitted upon reaching countrywise 100 % performance rate of UI reported.

Safety and Protective Measures

It is very important that any intervention in the equipment will start by disconnecting it from the power supply with the main circuit-breaker.

⚠WARNING

After shut-down of the system, there may still be 380 V DC present on the intermediate circuit.

Life-threatening electric shock hazard exists.

The voltage level will be indicated by LED V24 on PC Board D710. The voltage will drop to less than 30 V within about 3 minutes, the LED goes out at about 30 V.

⚠CAUTION

The PC Boards contain electrostatic highly sensitive components requiring particular care in their handling.

Risk of damaging components.

Follow ESD guidelines.

This symbol indicates exposure of x-ray radiation.

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General

The MAMMOMAT generators in the serial numbers mentioned above frequently indicate ERROR 606, which may be attributable to a batch of one type of component with unstable characteristics used on PC Board D705.

Preparatory Work

1. Mains voltage and system OFF.
2. Open the front cover of the generator as follows:
   Pry loose the plastic strips (pos. 1 / Fig. 1) on both sides, using a screwdriver or similar tool. Loosen the sixteen screws (pos. 2 / Fig. 1) now accessible (eight on either side) and remove the front cover (pos. 3 / Fig. 1).

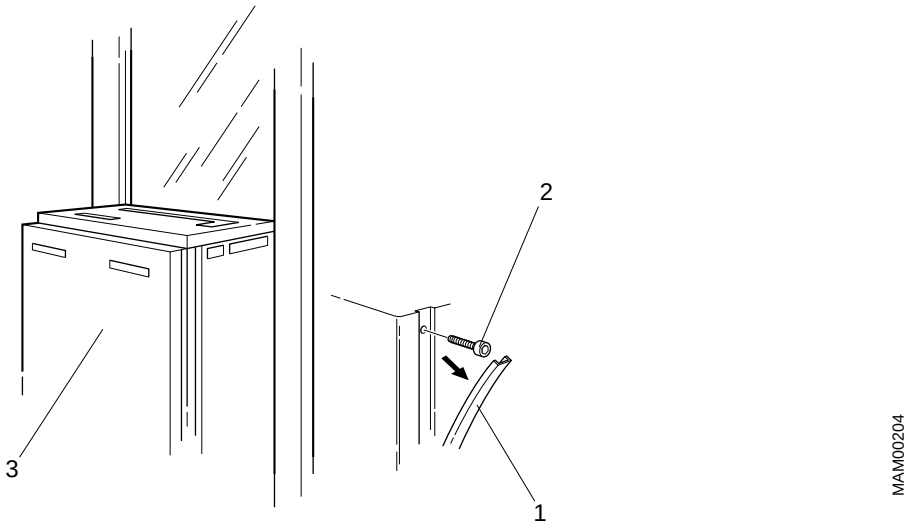

Fig. 1 Opening of the generator

NOTE

Be sure to keep the contact washers (there are four contact washers on either side). They will be needed again when reassembling the front cover, to establish protective ground connection.

⚠CAUTION

Sensitive electronic equipment!

Risk of damaging components.

Follow ESD guidelines and use ESD tools, e.g. ESD-pad with wrist-strap.

3. Check the actual product status (Ausführungsstand = AS) of the PC Board in the generator. If AS=06 then proceed with the crosscheck of the driving frequency of the anode starting device, step no. 7 - 16, and then attach the covers (step 18). If AS=05 or lower proceed as follows.
4. Remove the existing PC Board D705.
5. Insert the new PC Board D705, AS06.

6. Prepare for return of the old PC Board D705 in an ESD packaging envelope and in the original package of the kit. Observe the Notice on page 1-2.
7. Locate PC Board D702 and set the switch SS/S2 to OFF (lower position).

⚠CAUTION

Make sure SS/S2 is switched to OFF position.
If left in ON position, there will be exposure to X-ray radiation.
Switch SS/S2 to OFF position.

8. Connect the oscilloscope ground connector to any ground on the generator chassis.
9. Locate the connector X998 on PC Board D700.
10. Connect a fine probe from the oscilloscope to pin no. 9 of the connector X998. Refer to the "Wiring Diagrams" - Generator PC Board Overview, Contact Location, for pin location.
11. Mains voltage and system ON.
12. Set the oscilloscope beam to 5 Volts and 1 millisecond per division.
13. Release an exposure and measure the frequency. Verify that the frequency is 160 +/-5Hz.
    A single period of the triggering frequency has to be measured during the acceleration (approximately 2 seconds after pressing the release buttons). The frequency should be between 155Hz (corresponding to 6.45 msec), and 165Hz (corresponding to 6.06 msec).
14. If the frequency is not within the range prescribed, adjust by means of potentiometer R136 on PC Board D705.
15. Repeat the previous step until the measured frequency is within limits.
16. Set Switch SS/S2 to ON position.
17. Perform the procedure "Learn filament" according to the Service Program, Main Menu, Configuration Filament, for all active foci.
18. Reattach all covers.

Final Check

1. Check the function by releasing an exposure.

Final Work Steps

1. Previous changes of PC Board D705 resulting in product status AS06 that were completed prior to publication of this UI must be reported. (See condition under step 3.)
2. The update is reported according to the established process.

To be used for reporting only if online reporting is not possible

Completion Protocol/Update Completion Form

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Tel.: 49-(0)9131-84-3313 / 3259
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The update with the UI **SP006/02/P** has been completed.

The update could not be completed, reasons...

Part Number:	61 34 709	Model No:	.....
Serial Number:	.....	SKZ Country code:	.....
Customer:	.....	Site:	.....
Customer No.:	.....		
Name (CSE):	.....	Telephone:	.....
Country:	.....	Location:	.....
Date:	.....	Signature:	.....

Remark: .....

.....

NOTICE

After completing the update, make a copy of this page, fill it out and file it in Register 10 of the System Manual at the corresponding site.

Also send a copy / FAX to the above-listed address!

Insert one copy into the kit package returning the exchanged or unused PC Board D705.

Changes to Previous Revision

- Notice on page 1-2 rephrased.
- Step 3 on page 2-2 rephrased.